

To: The Federal Communication Commission

Re: Proceeding Number 12-52

From: Dr. Peng Hwa Ang
Director, Singapore Internet Research Centre,
Wee Kim Wee School of Communication and Information
Nanyang Technological University
Singapore

Date: May 26, 2012

Dear Sir/Madam,

Subject: Commission Seeks Comments on Certain Wireless Service Interruptions

I write in reply to the Comment by the San Francisco Bay Area Rapid Transit¹ dated April 30, 2012.

My reply is based on research I myself had conducted that will for forthcoming in Pacific Affairs journal² a version of which is currently available as a working paper on my Research Centre's website³ as well as on research by Dr. Navid Hassanpour.⁴

My research was conducted on the ground in Nepal on the impact of the 88-day shutdown in mobile communication; Dr. Hassanpour's research is based on theoretical modeling using the Egyptian uprising as the data pool.

In sum, both our research do not recommend a complete shutdown of mobile or similar communication for the following reasons.

First, a shutdown signals to a generally apathetic populace that the situation is serious. Most people are apolitical most of the time. That is, most people are usually not exercised over political issues most of the time. A shutdown that affects them, however, signals that the issue is serious and, depending on how badly they are affected, begins to politicize them.

In the cases of Nepal and Egypt, the shutdown angered the population because of its disruption and most certainly contributed to the downfall of the respective governments.

Second, a shutdown of modern communication creates a sense of isolation and insecurity and raises anxiety among those affected. This has been true of a shutdown in the availability of

¹ <http://apps.fcc.gov/ecfs/comment/view?id=6017032867>

² <http://www.pacificaffairs.ubc.ca/>

³ http://www.sirc.ntu.edu.sg/Documents/workingpapers/when_mobile_phone_cut.pdf

⁴ Noam Cohen, In Unsettled Times, Media Can Be a Call to Action, or a Distraction. New York Times, (2011) August 28. <http://www.nytimes.com/2011/08/29/business/media/in-times-of-unrest-social-networks-can-be-a-distraction.html?pagewanted=all>

newspapers⁵ and residential telephone service.⁶ For mobile communication, it means not just those protesters or rioters but residents in the affected areas as well.

My research found that there was much chatter on the streets as strangers talked to strangers to exchange information. In Hassanpour's model, ordinary citizens took to the streets to locate their loved ones. In fact, the protest in Tahrir Square in Egypt grew in size *after* the shutdown because of people looking for their loved ones.

I note that some of the comments have offered commercial solutions that would allow emergency services to be usable. My research suggests that the mobile phone is so woven into the fabric of modern society that even in a country like Nepal, a shutdown can be literally life-threatening. I interviewed a cardiologist who said that he gave his phone number to his patients' family so that in an emergency, they can reach him. In the 88 days of the mobile phone service cut, he lost four patients.

And contrary to common perception, that the mobile phone is essential to the large corporations, the mobile phone is even more relied upon by the small business owner who may use the phone as a "placeless place", obviating the need for an office space. When mobile communication was cut in Nepal, those in trades such as plumbers, small-job contractors, carpenters and electricians found that their customers could not reach them and so their jobs evaporated.

I would imagine that in a more developed country such as the USA, the mobile phone would be used even more as a part of modern living.

Finally, from a conceptual perspective, to the user, the mobile phone is not so much an individual-use device as it is a social network device. It is no use preaching to a mobile phone service subscriber that he or she does not have a right but a privilege to the service. To shut down the mobile phone service is to cut off the user's social network. It is this cut-off that induces the sense of isolation, loss, insecurity and hence anger.

Recommendations

For these reasons, even when the mobile phone (or mobile Internet) service is being abused to coordinate action that such as looting and rioting, the recommendation is not to shut it down. From the Hassanpour model and from conversations with security officials, the recommendation is for the service to be throttled. That is, the speed of the service should be slowed down and the service made less reliable. This means that an SMS (short message service) may take one minute or three minutes or three seconds to be transmitted. Such throttling disrupts the coordination needed by those who may want to riot, loot or cause

⁵ Bernard Berelson, "What 'Missing the Newspaper' Means," *Communication Research* (1949): 111-129.

⁶ Alan H. Wurtzel and Colin Turner, "What Missing the Telephone Means." *Journal of Communication* 27 (1977): 48-57.

damage and yet makes the mobile communication service available for other users for whom the service may be essential; in very few instances would there be a need for split-second critical contact.

Any communication blackout is a very serious matter, and so should be done only in a crisis or emergency situation. The London riots, where there appeared to be organized looting and damage to property, may be such an instance that presented itself as an instance of a “clear and present danger”. When such a situation arises should be decided by an independent body such as a tribunal of three judges. Speed is of the essence so the mechanism to be established must recognize the need for urgency.


Potentially, throttling may also be useful in such situations as disasters and crisis where there is a tendency for phone traffic into and out of the affected area to spike and congest. The recommendation is for the throttling to slow down or even stop some traffic so that other traffic can go out. This would be the equivalent of having red traffic lights in order that others can have green traffic lights. Like traffic lights, the stop-go traffic will alternate in bursts of, say, five to ten minutes.

This recommendation is still at the conceptual stage and experimentation will be needed to validate the predictions.

Conclusion

The very power of the mobile phone for good also means the potential power for harm. But because of the way the mobile phone is woven into the fabric of modern daily living, whatever decision is taken should be taken judiciously. And judicious thinking suggests that the mobile phone should be trimmed (i.e. throttled) rather than cut. What is decided here will likely set a precedent for the rest of the world.

Sincerely,



Professor Peng Hwa Ang